UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,944	12/10/2003	Toshihiko Kaku	Q78811	6284

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EXAMINER
RUSH, ERIC

ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)
Office Action Summary		10/730,944	KAKU, TOSHIHIKO
		Examiner	Art Unit	
		Eric Rush	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 August 2007*.

2a)☐ This action is **FINAL**.　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☒ All　b)☐ Some * c)☐ None of:

　　　1.☒ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

2.   Claims 1 - 2 and 8 - 9 are rejected under 35 U.S.C. 102(e) as being anticipated

by Fuersich et al. U.S. Publication No. 2003/0044070 A1.

-       With regards to claim 1, Fuersich et al. teach a face recognition method

        for recognizing face portions in an image based on image data of the

        image, comprising: a detection step of detecting, in the image, eye

        portions which have undergone a predetermined color change, based on

        the image data; (Fuersich et al., Page 5 Paragraph 0047 and Paragraph

        0050) and a recognition step of recognizing face portions in the image

        based on the eye portions detected in the detection step. (Fuersich et al.,

        Figs. 1A, 1B, & 1C, Page 6 Paragraph 0054)

-       With regards to claim 2, the face recognition method according to claim 1,

        wherein the detection step detects red-eye portions in the image.

        (Fuersich et al., Page 5 Paragraph 0047 and 0050, Page 6 Paragraph

        0052)

-        With regards to claim 8, the face recognition method according to claim 1,

         wherein the detection step of detecting eye portions which have under

         gone a predetermined color change includes comparing a pixel value of

         the image data with a reference pixel value which corresponds to the

         predetermined color change. (Fuersich et al., Page 5 Paragraphs 0047

         and 0050, Page 6 Paragraph 0052)

-        With regards to claim 9, the face recognition method according to claim 8,

         wherein the reference pixel value is a red reference value or a gold

         reference value. (Fuersich et al., Page 5 Paragraph 0047 and 0050, Page

         6 Paragraph 0052)

Claim Rejections - 35 USC § 103

3.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

4.   Claims 3 – 7, 11 – 12, 14 – 15, and 17 – 18 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Fuersich et al. U.S. Publication No. 2003/0044070 A1 in

view of Chen et al. U.S. Publication No. 2002/0081032 A1.

-        With regards to claim 3, Fuersich et al. teach a method that recognizes

         face portions in an image based on image data of the image, comprising:

         a detection section which detects, in the image, eyes which have

undergone a predetermined color change, based on the image data;

(Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050) and a

recognition section which recognizes face portions in the image based on

the eyes detected by the detection section. (Fuersich et al., Figs. 1A, 1B,

& 1C, Page 6 Paragraph 0054) Fuersich et al. fail to teach a face

recognition apparatus, which recognizes face portions in an image. Chen

et al. teach a face recognition apparatus, which recognizes face portions

in an image. (Chen et al. Fig. 1, Page 3 Paragraph 0091) It would have

been obvious to one of ordinary skill in the art at the time of the invention

to modify the teachings of Fuersich et al. with the teachings of Chen et al.

This modification would have been prompted in order to employ the

method as disclosed by Fuersich et al. in to real world practice effectively

and efficiently.

-        With regards to claims 4 and 5, Fuersich et al. teach a face extraction

method for extracting face portions from an image and generating facial

images based on image data of the image, comprising: a detection step of

detecting, in the image, eye portions which have undergone a

predetermined color change, and/or red-eyes, based on the image data;

(Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050) a

recognition step of recognizing face portions in the photographic image

based on the eye portions detected in the detection step; (Fuersich et al.,

Figs. 1A, 1B, & 1C, Page 6 Paragraph 0054) and a correction step of

correcting the color change in the eye portions detected in the detection

step. (Fuersich et al., Figs. 1A, 1B, & 1C, Page 6 Paragraph 0054)

Fuersich et al. fail to teach a face image generating step of generating

facial images by extracting, from the image, the face portions which have

been recognized in the recognition step and whose color change has been

corrected in the correction step. Chen et al. teach a face image generating

step of generating facial images by extracting, from the image, the face

portions which have been recognized in the recognition step and whose

color change has been corrected in the correction step. (Chen et al. Page

4 Paragraph 0099 Lines 5 – 10) It would have been obvious to one of

ordinary skill in the art at the time of the invention to modify the teachings

of Fuesich et al. with the teachings of Chen et al. This modification would

have been prompted in order to create mugshot type images which may

be used in a variety of applications from biometric identification to saving

storage space in memory.

-        With regards to claim 6, Fuersich et al. teach a method comprising an

image pickup apparatus which photographs a subject and generates

photographic image data of a photographic image, comprising: a detection

section that detects, in the photographic image, eye portions which have

undergone a predetermined color change, based on the image data;

(Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050) a

recognition section that recognizes face portions in the photographic

image based on the eye portions detected by the detection section;

(Fuersich et al., Figs. 1A, 1B, & 1C, Page 6 Paragraph 0054) and a

correction section that corrects the color change in the eye portions

detected by the detection section. (Fuersich et al., Figs. 1A, 1B, & 1C,

Page 6 Paragraph 0054) Fuersich et al. fail to teach an image pickup

apparatus and a face image generating section that generates facial

images by extracting, from the photographic image, the face portions

which have been recognized by the recognition section and whose color

change has been corrected by the correction section. Chen et al. teach an

image pickup apparatus (Chen et al., Column 3 Lines 54 – 67) and a face

image generating step of generating facial images by extracting, from the

image, the face portions which have been recognized in the recognition

step and whose color change has been corrected in the correction step.

(Chen et al. Page 4 Paragraph 0099 Lines 5 – 10) It would have been

obvious to one of ordinary skill in the art at the time of the invention to

modify the teachings of Fuesich et al. with the teachings of Chen et al.

This modification would have been prompted in order to create mugshot

type images, which may be used in a variety of applications from biometric

identification to saving storage space in memory. Also, Chen et al.

disclose the image pickup apparatus, which is suggested by Fuersich et

al. (Page 4 Paragraph 0040) that would have made it obvious to one of

ordinary skill in the art at the time of the invention to include in their

method in order to add functionality to the method effectively and

efficiently in real world practice.

-       With regards to claim 7, Fuersich et al. in view of Chen et al. teach the

image pickup apparatus according to claim 6. Fuersich et al. teach

wherein the detection section detects red-eye portions in the image

(Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050) and the

correction section corrects the red-eye portions detected by the detection

section. (Fuersich et al., Figs. 1A, 1B, & 1C, Page 6 Paragraph 0054)

- With regards to claim 11, Fuersich et al. in view of Chen et al. teach the face recognition apparatus according to claim 3. Fuersich et al. teach wherein the detection section which detects eyes which have undergone a predetermined color change, compares a pixel value of the image data with a reference pixel value which corresponds to the predetermined color change. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050)

- With regards to claim 12, Fuersich et al. in view of Chen et al. teach the face recognition apparatus according to claim 11. Fuersich et al. teach wherein the reference pixel value is a red reference value or a gold reference value. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050)

- With regards to claim 14, Fuersich et al. in view of Chen et al. teach the face extraction method according to claim 4. Fuersich et al. teach wherein the detection step of detecting eye portions which have undergone a predetermined color change includes comparing a pixel value of the image data with a reference pixel value which corresponds to the predetermined color change. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050)

-   With regards to claim 15, Fuersich et al. in view of Chen et al. teach the face extraction method according to claim 14. Fuersich et al. teach wherein the reference pixel value is a red reference value or a gold reference value. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050)

-   With regards to claim 17, Fuersich et al. in view of Chen et al. teach the face recognition apparatus according to claim 6. Fuersich et al. teach wherein the detection section that detects eyes which have undergone a predetermined color change, compares a pixel value of the image data with a reference pixel value which corresponds to the predetermined color change. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050)

-   With regards to claim 18, Fuersich et al. in view of Chen et al. teach the face recognition apparatus according to claim 17. Fuersich et al. teach wherein the reference pixel value is a red reference value or a gold reference value. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050)

5.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuersich et al. U.S. Publication No. 2003/0044070 as applied to claim 1 above, and further in view of Nesterov et al. U.S. Patent No. 6,980,691.

-        With regards to claim 10, Fuersich et al. teach the face recognition method

according to claim 1. Fuersich et al. fail to teach wherein the

predetermined color change is a gold-eye occurrence. Nesterov et al.

teach wherein the predetermined color change is a gold-eye occurrence.

(Nesterov et al., Column 1 Lines 15 – 28) It would have been obvious to

one of ordinary skill in the art at the time of the invention to modify the

teachings of Fuersich et al. to include the teachings of Nesetrov et al. This

modification would have been prompted because Nesterov et al. state that

gold-eye occurrences can occur and create un-welcomed image qualities

similar to red-eye. Therefore modifying Fuersich et al. to not only detect

and correct for red-eye but gold-eye along with any other color that may

be harmful to the quality of picture would have been obvious to increase

the capabilities and range of photograph enhancement that Fuersich et al.

could obtain.

6.   Claims 13, 16, and 19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Fuersich et al. U.S. Publication No. 2003/0044070 A1 in view of

Chen et al. U.S. Publication No. 2002/0081032 A1 as applied to claims 3, 4, and 6

above, and further in view of Nesterov et al. U.S. Patent No. 6,980,691.

-        With regards to claim 13, Fuersich et al. in view of Chen et al. teach the

         face recognition apparatus according to claim 3. Fuersich et al. fail to

         teach wherein the predetermined color change is a gold-eye occurrence.

         Nesterov et al. teach wherein the predetermined color change is a gold-

         eye occurrence. (Nesterov et al., Column 1 Lines 15 – 28) It would have

         been obvious to one of ordinary skill in the art at the time of the invention

         to modify the combined teachings of Fuersich et al. in view of Chen et al. /

         to include the teachings of Nesetrov et al. This modification would have

         been prompted because Nesterov et al. state that gold-eye occurrences

         can occur and create un-welcomed image qualities similar to red-eye.

         Therefore modifying Fuersich et al. to not only detect and correct for red-

         eye but gold-eye along with any other color that may be harmful to the

         quality of picture would have been obvious to increase the capabilities and

         range of photograph enhancement that Fuersich et al. could obtain.

- With regards to claim 16, Fuersich et al. in view of Chen et al. teach the face extraction method according to claim 4. Fuersich et al. fail to teach wherein the predetermined color change is a gold-eye occurrence. Nesterov et al. teach wherein the predetermined color change is a gold-eye occurrence. (Nesterov et al., Column 1 Lines 15 – 28) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of Fuersich et al. in view of Chen et al. to include the teachings of Nesetrov et al. This modification would have been prompted because Nesterov et al. state that gold-eye occurrences can occur and create un-welcomed image qualities similar to red-eye. Therefore modifying Fuersich et al. to not only detect and correct for red-eye but gold-eye along with any other color that may be harmful to the quality of picture would have been obvious to increase the capabilities and range of photograph enhancement that Fuersich et al. could obtain.

- With regards to claim 19, Fuersich et al. in view of Chen et al. teach the face recognition apparatus according to claim 6. Fuersich et al. fail to teach wherein the predetermined color change is a gold-eye occurrence. Nesterov et al. teach wherein the predetermined color change is a gold-eye occurrence. (Nesterov et al., Column 1 Lines 15 – 28) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of Fuersich et al. in view of Chen et al. to include the teachings of Nesetrov et al. This modification would have been prompted because Nesterov et al. state that gold-eye occurrences can occur and create un-welcomed image qualities similar to red-eye. Therefore modifying Fuersich et al. to not only detect and correct for red-eye but gold-eye along with any other color that may be harmful to the quality of picture would have been obvious to increase the capabilities and range of photograph enhancement that Fuersich et al. could obtain.

Response to Arguments

7.   Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Li U.S. Publication No. 2002/0150280 A1; which is directed towards a face detection method.

- Matama U.S. Patent No. 7,042,501; which is directed to an image processing apparatus.

- Takaoka U.S. Patent No. 6,798,903; which is directed towards an image processing method and device.
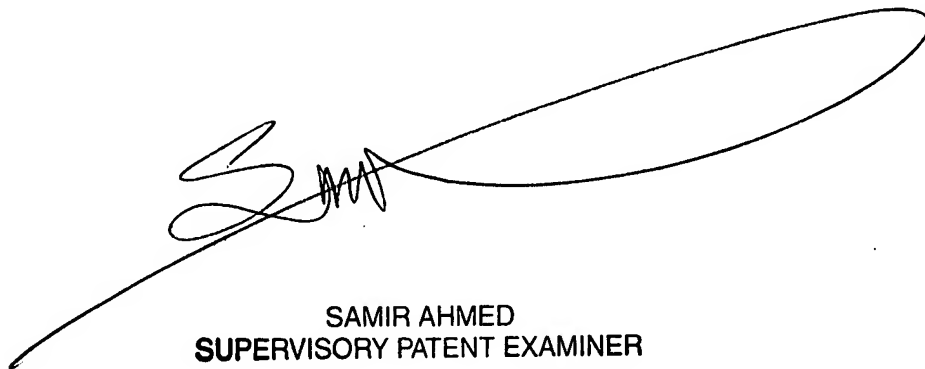

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Rush whose telephone number is (571) 270-3017. The examiner can normally be reached on 7:30AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on (571) 272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ER

SAMIR AHMED
SUPERVISORY PATENT EXAMINER